S0913 Rev. -
P0981 "As-Built" Att.

W. W. Hansen Experimental Physics Laboratory

STANFORD UNIVERSITY

STANFORD, CALIFORNIA 94305 - 4085

Gravity Probe B Relativity Mission

S0913
Revision -

Verification Report for Automated Import Scripts 1.0

August 4, 2003

Approvals

NAME	SIGNATURE	DATE
Samantha Patterson *Software Engineer*	Samantha Patterson	9/10/3
Rodney Torii *Data Processing Lead*		9/10/03
Ron Sharbaugh *S/W Manager*		9/10/03
Marcie Smith *MOC Project Manager*		10 Sept 03
Kelly Burlingham *Software Quality Engineer*		9/10/03

History

REV	DATE	AUTHOR	COMMENTS
-	4 Aug2003	sap	initial version

Tom Langenstein ITAR Assessment Performed, ITAR Control Req'd? ___ Yes X No

9/11/03

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REVISION HISTORY

REV	DATE	AUTHOR	COMMENTS
-	4 August 2003	SAP	initial version

1 INTRODUCTION

This document details testing of the automated import cronjobs.

Testing objectives insure that automated imports do not conflict with manual imports.

- Transfers data correctly from moc to science.
- Initiates import of data into database.
- Uses correct cycle number for database entry.
- Aborts processing and waits for manual input on any error.
- Sends e-mail to data processing team on automated import status.
- Pushes data summaries to the gpbops account.

1.1 Organization

2 APPLICABLE DOCUMENTS

Document No.	Document	ALIAS.
S0401	Stanford Post-Processing Operations for Science Mission Data	
P0904	Data Processing Through a Spacecraft Clock Reset	
S0908	Automated Import Software Requirements Document	
P0981	Automated Import Scripts Software Design Document	
S0912	Automated Import Scripts Version Description Document	
S0909	Automated Import Scripts Software Design Document	

3 TEST CASES

The following tests are detailed in Attachment A; an as-run copy of P0981.

- MOC1: Transferring data from moc to science.
- SCI1: Automatically importing into science databases.

ATTACHMENT To SO913
P0981 Rev. - "AS-BUILT"

W. W. Hansen Experimental Physics Laboratory

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Gravity Probe B Relativity Mission

P0981
Revision -

Automated Import Scripts Software Test Document

August 4, 2003

Approvals

NAME	SIGNATURE	DATE
Samantha Patterson *Software Engineer*	Samantha Patterson	8/4/03
Rodney Torii *Data Processing Lead*		8/4/03
Ron Sharbaugh *S/W Manager*		8/4/03
Marcie Smith *MOC Project Manager*		4 Aug 03
Kelly Burlingham *Software Quality Engineer*		8/4/03

History

REV	DATE	AUTHOR	COMMENTS
-	25 June2003	sap	initial version

Tom Langenstein ITAR Assessment Performed, ITAR Control Req'd? ___ Yes ___ No

Table of Contents:

1 REVISION HISTORY

REV	DATE	AUTHOR	COMMENTS
-	25 June 2003	SAP	initial version

2 SCOPE

Testing of the moc-server and science server cronjobs for automated imports.

3 OPERATIONAL PERSONNEL

Samantha Patterson
Qualified QA Rep: Kelly Burlingham

4 QUALITY ASSURANCE PROVISIONS

Quality Assurance must be given 24 hour notification before this test is run; presence is at their discretion.

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QA Notified Date & Time: 8/4/03 930 By: S. PATTERSON QA Initials: _____

5 TEST ENVIRONMENT

Software Configurations	Version Number
TDP	
Solaris	

6 TEST CASES AND FILE VERSION MATRIX

Files on Moc-Server

File	RCS Ver	Test Name	Test Section
/home/safs/apps/moc_auto.cron	1.1	MOC1	Section 13.1
/home/safs/apps/science_auto.cron	1.2	SCI1	Section 13.2

Files on science

File	RCS Ver	Test Name	Test Section
/home/tdp/apps/sci_auto.cron	1.2	SCI1	Section 13.1

The following sections describes how to test
AUTO IMPORT
~~TQSM~~ Version 1.0

Start Date & Time: 8/4/03 330

Executed By: ~~Samantha Patterson~~ Signature: Samantha Patterson

Witnessed By: S. BURLINGHAM Signature:

7 APPLICABLE DOCUMENTS

Document No.	Document	ALIAS.
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S0912	Automated Import Scripts Version Design Document	
S0913	Automated Import Scripts Software Verification Report	

8 SOFTWARE VERIFICATION PLAN

The following table lists the CSCI software objects that comprise TDP and TCAD, and for each CSCI lists the test cases which must pass to verify it:

SOFTWARE OBJECT	TEST CASES
Moc_auto.cron	MOC1: throughput
Science_auto.cron	SCI1: auto_import initializationation

8.1 MOC1: Throughput

❑ (B)
Test Case Verification Number: MOC1

INTRODUCTION
This test case verifies the file handling of the cron job on moc-server and may be run independently of any other step in this process.

APPROACH
Copy files into the /home/safs/data/VC0 and /home/safs/data/V12 directory and wait.

FEATURES TO BE TESTED
- ❑ Copying data from moc-server to science.
- ❑ Moving data from VC0 and V12 directories to /home/safs/data/processed directory.

FEATURES NOT TO BE TESTED
- SAFS network data transmission.

- Science_auto.cron functionality.

TESTS

i. Copy bin file(s) into the moc-server /home/safs/vc0 and /home/safs/v12 directories and run moc_auto.cron from the command line.
ii. Repeat first test (using a different file name), but this time, start moc_auto.cron while the copy is in process (NOTE: this may require using a slower transfer method such as SCPing the file from podg or a directory on science)
iii. Use 'crontab –e' to insert a cronjob for this script for user SAFS. (See man pages on cron and crontab for crontab format) and repeat step 1 (again using a different file name).

TEST PASS CRITERIA

- The file(s) used in step one appeared in the matching subdirectory of the /home/tdp directory on science.
- The unix tools 'sum' and ls –l indicate identical file size and checksum for the file on moc-server and its duplicate on science.
- The file on moc-server was moved to /home/safs/processed.
- The file from the second test is NOT transfered to science when the moc_auto.cron script has finished. (NOTE: the moc_auto.cron script must complete before the file transfer does to validate this step)
- The file(s) used in step 3 are copied to science in approximately the same amount of time (from the start time of the cron job) as they were when run manually.

RESULT: PASS FAIL (circle one) initials

8.2 SCI1: auto_import.exp initialization

❑ (B)
Test Case Verification Number: SCI1

INTRODUCTION
This test verifies assignment of a cycle number and initialization of the auto_import routine for ingestion of data into the level 0 and level 1 databases.

APPROACH
Manual and automated launch of script after placing data in the incoming directory.

FEATURES TO BE TESTED

❑ Selection of cycle number.
❑ Creation of auto_import.exp command file.
❑ Creation of log of auto_import run.
❑ Initialization of auto_import.exp

- ❑ Run from science-server
- ❑ Run from moc-server
- ❑ Push import logs to Relgyro for SAFS confirmation.

FEATURES NOT TO BE TESTED

- Transmission of data from moc-server to science.
- import of data into L0 and L1 databases.
- Data confirmation message to SAFS.
- Update of IMPORT_LOG.TXT file.
- Detection of clock-resets.

TEST

Due to the nature of this test, it is strongly recommended that all testing of this script be issued with the command-line argument, '-CHECKONLY' to prevent accidental or erroneous insertion of data into the Sybase databases. The only effect this has on the process is to disable BCP of data into the databases. BCP validation is handled in S0613, the test document for TDP/TCAD:

i. Create the file /home/tdp/processed/IMPORT_LOG.TXT as defined in section 3.1 of this document.
ii. Copy a known good bin file into the /home/tdp/ vc0, /home/tdp/v12, or /home/tdp/framex directory.
iii. Run science_auto.cron manually with the –checkonly flag.
iv. Repeat the second step and rerun step 3 while the copy is in process (once again, this may require a slower copy method such as SCP)
v. Add an entry to the crontab for user tdp on science (see man pages for cron and crontab for crontab format) and repeat step 2.
F → vi. Switch to running this application from moc-server instead of science and repeat all steps prior to this one.

TEST PASS CRITERIA

- The file(s) copied into the incoming directory in step 2 were moved to the /home/tdp/processed directory.
- A file named cmd.MMDDYY_HH:mm:SS (where MM is month, DD is day of month, YY is year, HH is hour, mm is minute and SS is second) was created in /home/tdp/processed/commands. This file contains a line for each file put in the incoming directory and the cycle number specified n the /home/tdp/processed/IMPORT_LOG.TXT.
- A file with the same date and time stamp in the /home/tdp/processed/logs directory exists and contains a log of the auto_import process.
- The file specified in test 4 did not generate a command or log file while the copy of this file was in progress.
- Login to https://gpbops.stanford.edu/dp/ and confirm update of the pushed logfile. summary
- PASS conditions are met on both Science and Moc-Server systems.

RESULT: (PASS) FAIL (circle one) SP initials

Passes as Moc + Science config. OK for Sim.
Moc-Only config has problem w/ paths + permissions.

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9 TEST COMPLETION

OVERALL: PASS FAIL

Samantha Patterson 8/4/03

TEST OPERATOR (signature) Date

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QA WITNESS 8/4/03

Date

10. GLOSSARY

This section contains an alphabetic list and definitions of all acronyms used in the document, all proper nouns, and any words used in a non-standard way.

Word	Detail
CSCI	Computer Software Configuration Item
LASP	Laboratory for Atmospheric and Space Physics, University of Colorado
moc-server	Host name of the SUN computer that is the primary server for the MOC.
science server	Host name of the SUN computer which is the primary server for science LAN
SAFS	Standard Autonomous File Server (GSFC facility)
MOC	Mission Operations Center
TCAD	Telemetry Checking, Analysis, and Display
TCNV	Test Case Number which Validates the fix
TDP	Telemetry Data Processing
Startup window	The window containing the Unix command line from which TCAD was started
FEP	Front End Processor
IPDU	Internet Protocol Data Unit
VDD	Version Description Document
MSS	Mission Support Software. This MSS database is the flight Sybase database containing all telemetry monitor information and format definitions, among other items.
DBROget	Database ReadOut retrieval program for APID 300 packets from the Level 0 database.
MROget	Memory ReadOut retrieval program for APID 2xx packets from the Level 0 database.
Eventget	Event retrieval program for APID 301 packets from the Level 0 database.
Snapread.m	Snapshot retrieval program for APID 400 packets from the Level 0 Snapshots data table.